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Inventor/title: Piers/Multifocal Ophthalmic Lens

Examiner/ArtUnit: 3738/Izquierdo

37 CFR 1.98(A)(1) Reference Citation

LISTING OF UNITED STATES PATENTS - U series

EXAMINER INITIALS	REFERENCE NUMBER (U SERIES)	PATENT NUMBER	ISSUE DATE	NAME OF PATENTEE OR APPLICANT	PAGE/LINE AND FIGURE/ELEMENT OF RELEVANT MATERIAL AND/OR IDENTIFICATION OF PRIORITY APPLICATION IN WHICH REFERENCE IS CITED ("Of Record" indicates that the reference is already of record.)
	U-001	3722986	Mar-73	Tagnon	Of Record
	U-002	4460275	Jul-84	Spriggs	Of Record
	U-003	4504892	Mar-85	Zulfilar	Of Record
	U-004	4606626	Aug-86	Shinohara	Of Record
	U-005	4637697	1/1/1987	Freeman	Of Record
	U-006	4641934	2/1/1987	Freeman	Of Record
	U-007	4642112	2/10/1987	Freeman	Of Record
	U-008	4655565	4/1/1987	Freeman	Of Record
	U-009	4710193	12/1/1987	Volk	Of Record
	U-010	4881804	11/1/1989	Cohen	Of Record
	U-011	4881805	11/1/1989	Cohen	Of Record
	U-012	4898461	2/1/1990	Portney	Of Record
	U-013	4895714	2/1/1991	Cohen	Of Record
	U-014	5050981	9/1/1991	Roffman	Of Record
	U-015	5056908	10/1/1991	Cohen	Of Record
	U-016	5076684	12/1/1991	Simpson et al.	Of Record
	U-017	5089023	2/1/1992	Swanson	Of Record
	U-018	5089024	2/18/1992	Christie et al.	Of Record
	U-019	5096285	3/1/1992	Silberman	Of Record
	U-020	5100226	3/1/1992	Freeman	Of Record
	U-021	5104212	4/1/1992	Taboury et al.	Of Record

	U-022	5116111	5/1/1992	Simpson et al.	Of Record
	U-023	5117306	5/1/1992	Cohen	Of Record
	U-024	5120120	6/1/1992	Cohen	Of Record
	U-025	5129718	7/1/1992	Futhey et al.	Of Record
	U-026	5178636	1/1/1993	Silberman	Of Record
	U-027	5225858	7/1/1993	Portney	Of Record
	U-028	5229797	7/1/1993	Futhey et al.	Of Record
	U-029	5236970	8/1/1993	Christ et al.	Of Record
	U-030	5344447	9/1/1994	Swanson	Of Record
	U-031	5349471	9/1/1994	Morris et al.	Of Record
	U-032	5384606	1/1/1995	Koch et al.	Of Record
	U-033	5444186	8/1/1995	Zhou et al.	Of Record
	U-034	5581405	12/1/1996	Meyers et al.	Of Record
	U-035	5629800	5/1/1997	Hamblen	Of Record
	U-036	5652638	7/1/1997	Roffman et al.	Of Record
	U-037	5674284	10/1/1997	Change et al.	Of Record
	U-038	5683457	11/1/1997	Gupta et al.	Of Record
	U-039	5699142	12/1/1997	Lee et al.	Of Record
	U-040	5715091	2/1/1998	Meyers	Of Record
	U-041	5724258	3/3/1998	Roffman	Of Record
	U-042	5728156	3/1/1998	Gupta et al.	Of Record
	U-043	5748282	5/1/1998	Freeman	Of Record
	U-044	5760871	6/1/1998	Kosoburd et al.	Of Record
	U-045	5777719	7/1/1998	Williams et al.	Of Record
	U-046	5888122	3/1/1999	Gupta et al.	Of Record
	U-047	5895422	4/1/1999	Hauber	Of Record
	U-048	5895610	4/1/1999	Chang et al.	Of Record
	U-049	5968095	10/1/1999	Norrby	Of Record
	U-050	6007747	12/1/1999	Blake et al.	Of Record
	U-051	6019472	2/1/2000	Koester et al.	Of Record
	U-052	6050687	4/1/2000	Bille et al.	Of Record

	U-053	6082856	7/1/2000	Dunn et al.	Of Record
	U-054	6086204	7/1/2000	Magnante	Of Record
	U-055	6095651	8/1/2000	Williams et al.	Of Record
	U-056	6120148	9/19/2000	Fiala et al.	Of Record
	U-057	6139145	10/1/2000	Israel	Of Record
	U-058	6154323	11/1/2000	Kamo	Of Record
	U-059	6215096	4/1/2001	Von Wallfeld et al.	Of Record
	U-060	6224211	5/1/2001	Gordon	Of Record
	U-061	6270220	8/1/2001	Keren	Of Record
	U-062	6325510	12/1/2001	Golub et al.	Of record
	U-063	6338559	1/1/2002	Williams et al.	Of Record
	U-064	6413276	7/1/2002	Werblin	Of Record
	U-065	6429972	8/1/2002	Ota et al.	Of Record
	U-066	6457826	10/1/2002	Lett	Of Record
	U-067	6536899	3/1/2002	Fiala	Of Record
	U-068	6547391	4/1/2003	Ross, III et al.	Of Record
	U-069	6585375	7/1/2003	Domitzky et al.	Of Record
	U-070	6616275	9/1/2003	Dick et al.	Of Record
	U-071	6830332	12/1/2004	Piers et al.	Of Record
	U-072	6835204	12/1/2004	Stork et al.	Of Record
	U-073	6848790	2/1/2005	Dick et al.	Of Record
	U-074	6851803	2/1/2005	Wooley et al.	Of Record
	U-075	6972032	12/1/2005	Aharoni et al.	Of Record
	U-076	5220359	6/15/1993	Roffman	Of Record
	U-077	5800532	9/1/1998	Lieberman	Of Record
	U-078	6089711	7/18/2000	Blankenbecle r et al.	Of Record
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	U-080	6818158	11/16/2004	Pham et al.	Of Record
	U-081	5,448,312	9/5/1995	Roffman et al.	Of Record

	U-082	5,485,228	1/16/1996	Roffman et al.	Of Record
	U-083	5,682,223	10/28/1997	Menezes et al.	Of Record
	U-084	5,684,560	11/4/1997	Roffman et al.	Of Record
	U-085	5,715,031	2/3/1998	Roffman et al.	Of Record
	U-086	5,796,462	8/18/1998	Roffman et al.	Of Record
	U-087	5,805,260	9/8/1998	Roffman et al.	Of Record
	U-088	5,847,802	12/8/1998	Menezes et al.	Of Record
	U-089	5,929,969	7/27/1999	Roffman	Of Record
	U-090	6,520,638	2/18/2003	Roffman et al.	Of Record
	U-091	6,582,076	6/24/2003	Roffman et al.	Of Record
	U-092	6,709,103	3/23/2004	Roffman et al.	Of Record
	U-093	4,504,982	3/19/1985	Bark	Of Record
	U-094	6,755,524	6/2004	Ruben et al.	
	U-095	7,111,938	9/26/2006	Andino et al.	
Date:			Examiner's Signature:		

LISTING OF UNITED STATES PUBLISHED APPLICATIONS - P Series

EXAMINER INITIALS	REFERENCE NUMBER (P SERIES)	PUBLICATION NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	PAGE/LINE AND FIGURE/ELEMENT OF RELEVANT MATERIAL AND/OR IDENTIFICATION OF PRIORITY APPLICATION IN WHICH REFERENCE CITED ("Of Record" indicates that the reference is already of record.)
	P-001	2002/0093701	7/1/2002	Zhang et al.	Of Record
	P-002	2002/0105617	8/1/2002	Norriy et al.	Of Record
	P-003	2003/0014107	1/1/2003	Reynard	Of Record
	P-004	2003/0003254	4/1/2003	Piers et al.	Of Record
	P-005	2004/0080710	4/1/2004	Woolley et al.	Of Record
	P-006	2004/0088050	5/1/2004	Norriy et al.	Of Record
	P-007	2004/0138746	7/1/2004	Abaroni et al.	Of Record
	P-008	2004/0252274	12/1/2004	Morris et al.	Of Record
	P-009	2005/0057720	3/1/2005	Morris et al.	Of Record
	P-010	2005/0264757	12/1/2005	Morris et al.	Of Record
	P-011	2006/0004446	1/1/2006	Abaroni et al.	Of Record
	P-012	2006/0139570	6/1/2006	Blum et al.	Of Record
	P-013	2004/0246440	12/2004	Andino et al.	
Date:			Examiner's Signature:		

LISTING OF FOREIGN AND INTERNATIONAL PATENT DOCUMENTS - F Series

EXAMINE R INITIALS	REFEREN CE NUMBER (F SERIES)	PUBLICATION NUMBER	PUBLICATION DATE	COUNT RY OR REGION	PAGE/LINE AND FIGURE/ELEMENT OF RELEVANT MATERIAL ("Of Record" indicates that the reference is already of record.)	ENGLISH LANGUAGE TRANSLATI ON ATTACHED? (YES OR NO AND/OR IDENTIFICA TION OF PRIORITY APPLICATION IN WHICH REFERENCE IS CITED)
	F-001	WO 92/22264	6/1/1992	PCT	Of Record	
	F-002	WO 94/13225	12/1/1992	PCT	Of Record	
	F-003	WO 97/24639	12/1/1996	PCT	Of Record	
	F-004	WO 98/31299	7/1/1998	PCT	Of Record	
	F-005	WO 99/07309	7/1/1998	PCT	Of Record	
	F-006	WO 99/23520	10/1/1998	PCT	Of Record	
	F-007	WO 00/76426	12/21/2000	PCT	Of Record	
	F-008	WO 01/89424	11/29/2001	PCT	Of Record	
	F-009	WO 02/34158	5/2/2002	PCT	Of Record	
	F-010	WO 02/084381	10/1/2002	PCT	Of Record	
	F-011	WO 02/088830	11/1/2002	PCT	Of Record	
	F-012	WO 04/013680	7/1/2003	PCT	Of Record	
	F-013	WO 04/090611	3/1/2004	PCT	Of Record	
	F-014	EP 0 037 529	10/1/1981	EP	Of Record	Foreign Languag e w/Englis h Abstract
	F-015	EP 0 335 731	10/1/1989	EP	Of Record	
	F-016	EP 0 342 895	11/1989	EP	Of Record	
	F-017	EP 0 375 291	12/1989	EP	Of Record	
	F-018	EP 0 457 553	11/1991	EP	Of Record	
	F-019	EP 0 470 811	2/1992	EP	Of Record	
	F-020	EP 0 605 841	7/1994	EP	Of Record	

	F-021	EP 0 681 198	11/1995	EP	Of Record	
	F-022	EP 1 376 203	1/2004	EP	Of Record	
Date:			Examiner's Signature:			

LISTING OF NON PATENT LITERATURE - O Series

EXAMINER INITIALS	REFERENCE NUMBER (O Series)	PUBLICATION DATE	INCLUDE IN SEQUENCE: Name of first author (in CAPITAL LETTERS), Title in quotation marks, name of publication, date or publication, page numbers, publisher, city of publication, and country of publication	ENGLISH LANGUAGE TRANSLATION ATTACHED? (YES OR NO) AND/OR IDENTIFICATION OF PRIORITY APPLICATION IN WHICH REFERENCE IS CITED ("Of Record" indicates that the reference is already of record.)
	O-001		Atchison. Optical design of intraocular lenses. I. On-axis performance, <u>Optometry & Vision Science</u> . Vol. 66, No. 8, pp. 492-506.	Of Record
	O-002		Atchison. Optical design of intraocular lenses. II. On-axis performance, <u>Optometry & Vision Science</u> . Vol. 66, No. 9, pp. 579-590.	Of Record
	O-003		Atchison. Optical design of intraocular lenses. III. On-axis performance, <u>Optometry & Vision Science</u> . Vol. 66, No. 10, pp. 671-681.	Of Record
	O-004		Atchison. Refractive errors induced by displacement of intraocular lenses within the pseudophakic eye. <u>Optometry & Vision Science</u> . Vol. 66, No. 3, pp. 146-152.	Of Record
	O-005		Atchison. Third-order aberrations of pseudophakic eyes. <u>Ophthalm. Physiol. Opt.</u> April 1989. Vol. 9, pp. 205-211.	Of Record
	O-006		Bonnet, et al. New method of topographical ophthalmometry-its theoretical and clinical applications. <u>American Journal of Optometry and Archives of American Academy of Optometry</u> . May 1962. Vol. 39, No. 5, pp. 227-251.	Of Record
	O-007		Guillon et al. Corneal topography: a clinical model. <u>Ophthalm. Physiol. Opt.</u> 1986. Vol. 6, No. 1, pp. 47-56.	Of Record
	O-008		El Hage et al. Contribution of the crystalline lens to the spherical aberration of the eye. <u>Journal of the Optical Society of America</u> . February 1973. Vol. 63, No. 2, pp. 205-211.	Of Record
	O-009		Kiely et al. The mean shape of the human cornea. <u>Optica ACTA</u> . 1982. Vol. 29, No. 8, pp. 1027-1040.	Of Record

O-010	Lindsay, et al. Descriptors of corneal shape. <u>Optometry and Vision Science</u> . February 1998. Vol. 75, No. 2, pp. 156-158.	Of Record
O-011	Lotmar. Theoretical eye model with aspherics. <u>Journal of the Optical Society of America</u> . November 1971. Vol. 61, No. 11, pp. 1522-1529.	Of Record
O-012	Mandell, O.D. Ph.D., et al. Mathematical model of the corneal contour, School of Optometry, University of California, Berkeley. pp. 183-197.	Of Record
O-013	Smith et al. The spherical aberration of intraocular lenses. <u>Ophthalm. Physiol. Opt.</u> July 1988. Vol. 8, pp. 287-294.	Of Record
O-014	Townsend. New knowledge of the corneal contour. Pp. 38-43.	Of Record
O-015	Alvarez, S. D. et al. Spectral threshold: measurement and clinical applications, <u>British Journal of Ophthalmology</u> , 67, 1983, pp. 504-507.	Of Record
O-016	Cohen, A. L. Practical design of a bifocal hologram contact lens or intraocular lens, <u>Applied Optics</u> , Vol. 31, No. 19, July 1, 1992, pp. 3750-3754.	Of Record
O-017	Dwyer, W. O. et al. Racial differences in color vision: do they exist? <u>American Journal of Optometry & Physiological Optics</u> , Vol. 52, March 1975, pp. 224-229.	Of Record
O-018	Gean-Young, Y et al. Visual performance after correcting the monochromatic and chromatic aberrations of the eye, <u>Journal of the Optical Society of America</u> , Vol. 19, No. 2, February 2002, pp. 266-275.	Of Record
O-019	Griswold M. S. et al. Scotopic spectral sensitivity of phakic and aphakic observers extending into the near ultraviolet, <u>Vision Res.</u> , Vol. 32, No. 9, 1992, pp. 1739-1743.	Of Record
O-020	Guirao, A. et al. Corneal wave aberration from videokeratography: accuracy and limitations of the procedure, <u>Journal of the Optical Society of America</u> , Vol. 17, No. 6, June 2000, pp. 955-965.	Of Record

O-021		Kokoschka, S. et al. Influence of field size on the spectral sensitivity of the eye in the photopic and mesopic range, <u>American Journal of Optometry & Physiological Optics</u> , Vol. 62, No. 2, 1985, pp. 119-126.	Of Record
O-022		Marcos, S. et al. A new approach to the study of ocular chromatic aberrations, <u>Vision Research</u> , 39, 1999, pp. 4309-4323.	Of Record
O-023		Mordi, J. A. et al. Influence of age on chromatic aberration of the human eye, <u>American Journal of Optometry & Physiological Optics</u> , Vol. 62, No. 12, 1985, pp. 864-869.	Of Record
O-024		Navarro, R. et al. Accommodation-dependent model of the human eye with aspherics, <u>Journal of the Optical Society of America</u> , Vol. 2, No. 8, August 1985, pp. 1273-1281.	Of Record
O-025		Smith Kinney, J. A. Sensitivity of the eye to spectral radiation at scotopic and mesopic intensity levels, <u>Journal of the Optical Society of America</u> , Vol. 45, No. 7, July 1955, pp. 507-514.	Of Record
O-026		Said, F. S. et al. The variation with age of the spectral transmissivity of the living human crystalline lens, <u>Gerontologia</u> , 5, 1959, pp. 213-231.	Of Record
O-027		Thibos, L. N. et al. The chromatic eye: a new reduced-eye model of ocular chromatic aberration in humans, <u>Applied Optics</u> , Vol. 31, No. 19, July 1, 1992, pp. 3594-3600.	Of Record
O-028		Thibos, L. N. et al. Theory and measurement of ocular chromatic aberration, <u>Vision Res.</u> , Vol. 30, No. 1, September 26, 1988, pp. 33-49.	Of Record
O-029		Verriest, G. The spectral curve of relative luminous efficiency in different age groups of aphakic eyes, <u>Mod. Probl. Ophthal.</u> , Vol. 13, 1973, pp. 314-317.	Of Record
O-030		Artal et al. (November 1, 1998). Contributions of the cornea and the lens to the aberrations of the human eye. <u>Optics Letters</u> . Vol. 23, No. 21, pp. 1713-1715.	Of Record

	O-031		Glasser et al. (1998). Presbyopia and the optical changes in the human crystalline lens with age. <u>Vision Res.</u> Vol. 38, No. 2, pp. 209-229.	Of Record
	O-032		Liang et al. (July 1994). Objective measurement of wave aberrations of the human eye with the use of a Hartman-Shack wave-front sensor. <u>Journal of the Optical Society of America</u> . Vol. 11, No. 7, pp. 1949-1957.	Of Record
	O-033		Malacara et al. (June 1990). Wavefront fitting with discrete orthogonal polynomials in a unit radius circle. <u>Optical Engineering</u> . Vol. 29, No. 6, pp. 672-675.	Of Record
	O-034		Schwiegerlind et al. (October 1995). Representation of videokeratographic height data with Zernike polynomials. <u>Journal of the Optical Society of America</u> . Vol. 12, No. 10, pp. 2105-2113.	Of Record
	O-035		Seitz (1997). Corneal Topography. <u>Current Opinion in Ophthalmology</u> . Vol. 8, IV, pp. 8-24.	Of Record
	O-036		Wang et al. (May 1, 1980). Wave-front interpretation with Zernike polynomials. <u>Applied Optics</u> . Vol. 19, No. 9, pp. 1510-1518.	Of Record
	O-037		Atchison. (April 1991). Design of aspheric intraocular lens. <u>Ophthal, Physiol. Opt.</u> Vol. 11, pp. 137-146.	Of Record
	O-038		Greivenkamp et al. (1995). Visual acuity modeling using optical raytracing of schematic eyes. <u>American Journal of Ophthalmology</u> . 120:227-240.	Of Record
	O-039		Oshika et al. (June 1999). Changes in Corneal Wavefront Aberrations with Aging. <u>Investigative Ophthalmology & Visual Science</u> . Vol. 40, No. 7, pp. 1351-1354.	Of Record
	O-040		Patel et al. (May/June 1993). Shape and radius of posterior corneal surface. <u>Refractive and Corneal Surgery</u> . Vol. 9, pp.173-181	Of Record
	O-041		Smith et al. (2001). The spherical aberration of the crystalline lens of the human eye. <u>Vision Research</u> . 41:235-243.	Of Record
	O-042		IOVS, March 15, 1999, Vol. 40, No. 4; S535.	Of Record

	O-043		IOVS, March 15, 2000, Vol. 41, No. 4, S545.	Of Record
	O-044		J. A. Futhoy, "Diffractive bifocal intraocular lens," SPIE vol. 1052, pp. 142-148, (1989).	Of Record
	O-045		International Preliminary Examination Report for PCT/EP03/13683, mailed 9/16/2004.	Of Record
	O-046		International Search Report for PCT/EP03/13683, mailed 3/29/2004.	Of Record
	O-047		Buralli, D. A. Morris, G. M. & Rogers, I. R. Optical performance of holographic kinoforms. Appl. Opt. 28, 976-983 (1989).	Of Record
	O-048		Cohen, A. I. Diffractive bifocal lens designs. Optom Vis Sci 70, 461-8 (1993).	Of Record
	O-049		Military Standardization Handbook, "Optical Design", U.S. Department of Defense MIL-HDBK-141, Chapter 4 Visual Optics, pp. 4-1 - 4-19, October 5, 1962.	
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